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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: Fri Jun 08 18:59:17 EDT 2007

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\*\*\*\*\*

Reviewer Comments:

Arg Gly Leu

370

1

Please delete the "1" at the end of the submitted file; this appears  
after Sequence 217.

\*\*\*\*\*

Application No: 10535168 Version No: 2.0

Input Set:

Output Set:

Started: 2007-06-08 18:26:58.885  
Finished: 2007-06-08 18:27:09.502  
Elapsed: 0 hr(s) 0 min(s) 10 sec(s) 617 ms  
Total Warnings: 0  
Total Errors: 2  
No. of SeqIDs Defined: 217  
Actual SeqID Count: 217

Error code	Error Description
E 355	Empty lines found between the amino acid numbering and the
E 321	No. of Bases conflict, this line has no nucleotides SEQID (217)

# SEQUENCE LISTING

<110> Chiron SRL  
Norais, Nathalie  
Grandi, Guido

<120> Unexpected Meningococcus Surface Proteins

<130> P032364WO

<140> 10535168

<141> 2006-06-29

<150> PCT/IB03/06281

<151> 2003-11-17

<150> GB0226734.2

<151> 2002-11-15

<150> GB0307131.3

<151> 2003-03-27

<160> 217

<170> SeqWin99, version 1.02

<210> 1

<211> 403

<212> PRT

<213> Neisseria meningitidis

<400> 1

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Leu	Ile	Arg	Ala	Asp	Met	Asn	Val	Pro	Phe	Lys	Asp	Gly	Lys	Ile	Ser
		20					25					30			

Asp	Asp	Thr	Arg	Ile	Arg	Ala	Ser	Leu	Ala	Ser	Ile	Lys	Tyr	Cys	Val
	35					40					45				

Asp	Asn	Gly	Ala	Ser	Val	Ile	Val	Met	Thr	His	Leu	Gly	Arg	Pro	Thr
50					55					60					

Glu	Gly	Glu	Phe	His	Pro	Glu	Asp	Asp	Val	Ala	Pro	Val	Ala	Ala	His
65				70				75					80		

Leu	Gly	Ser	Leu	Leu	Gly	Lys	Asp	Val	Lys	Val	Leu	Asn	Asp	Trp	Arg
		85						90					95		

Glu	Asn	Lys	Pro	Ala	Leu	Asn	Ala	Gly	Asp	Val	Val	Met	Leu	Gln	Asn
		100					105					110			

Val	Arg	Ile	Asn	Lys	Gly	Glu	Lys	Lys	Asn	Asp	Leu	Glu	Leu	Gly	Lys
	115						120					125			

Ala	Tyr	Ala	Ser	Leu	Cys	Asp	Val	Phe	Val	Asn	Asp	Ala	Phe	Gly	Thr
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

130	135	140																	
Ala His Arg Ala Gln	Ala Ser Thr Glu	Ala Val Ala Gln	Ala Ala Pro																
145	150	155	160																
Val Ala Cys Ala Gly	Val Leu Met Ala	Gly Glu Leu Asp	Ala Leu Gly																
	165	170	175																
Lys Ala Leu Lys Gln	Pro Ala Arg Pro	Met Val Ala Ile	Val Ala Gly																
	180	185	190																
Ser Lys Val Ser Thr	Lys Leu Thr Ile	Leu Glu Ser Leu	Ala Asp Lys																
	195	200	205																
Val Asp Gln Leu Ile	Val Gly Gly Gly	Ile Ala Asn Thr	Phe Leu Leu																
	210	215	220																
Ala Glu Gly Lys Ala	Ile Gly Lys Ser	Leu Ala Glu His	Asp Leu Val																
225	230	235	240																
Glu Glu Ser Lys Lys	Ile Met Ala Lys	Met Ala Ala Lys	Gly Gly Ser																
	245	250	255																
Val Pro Leu Pro Thr	Asp Val Val Val	Ala Lys Ala Phe	Ala Ala Asp																
	260	265	270																
Ala Glu Ala Val Val	Lys Asp Ile Ala	Ala Asp Ala Glu	Ala Val Val																
	275	280	285																
Lys Asp Ile Ala Asp	Val Ala Glu Asp	Glu Met Ile Leu	Asp Ile Gly																
	290	295	300																
Pro Lys Ser Ala Ala	Ala Leu Ala Asp	Leu Leu Lys Ala	Ala Gly Thr																
305	310	315	320																
Val Val Trp Asn Gly	Pro Val Gly Val	Phe Glu Phe Asp	Gln Phe Ala																
	325	330	335																
Gly Gly Thr Lys Ala	Leu Ala Glu Ala	Ile Ala Gln Ser	Lys Ala Phe																
	340	345	350																
Ser Ile Ala Gly Gly	Gly Asp Thr Leu	Ala Ala Ile Ala	Lys Phe Gly																
	355	360	365																
Val Thr Glu Gln Ile	Gly Tyr Ile Ser	Thr Gly Gly Gly	Ala Phe Leu																
	370	375	380																
Glu Phe Leu Glu Gly	Lys Glu Leu Pro	Ala Val Ala Ala	Leu Glu Lys																
385	390	395	400																
Arg Gly Ala																			

<210> 2  
 <211> 170  
 <212> PRT  
 <213> Neisseria meningitidis

<400> 2

Met Asn Thr Leu Gln Lys Gly Phe Thr Leu Ile Glu Leu Met Ile Val  
1 5 10 15

Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln  
20 25 30

Asp Tyr Thr Ala Arg Ala Gln Val Ser Glu Ala Ile Leu Leu Ala Glu  
35 40 45

Gly Gln Lys Ser Ala Val Thr Glu Tyr Tyr Leu Asn His Gly Glu Trp  
50 55 60

Pro Gly Asn Asn Thr Ser Ala Gly Val Ala Thr Ser Ser Glu Ile Lys  
65 70 75 80

Gly Lys Tyr Val Lys Ser Val Glu Val Lys Asn Gly Val Val Thr Ala  
85 90 95

Gln Met Ala Ser Ser Asn Val Asn Asn Glu Ile Lys Gly Lys Lys Leu  
100 105 110

Ser Leu Trp Ala Lys Arg Gln Asn Gly Ser Val Lys Trp Phe Cys Gly  
115 120 125

Gln Pro Val Thr Arg Asp Lys Ala Lys Ala Ala Asn Asp Asp Val Thr  
130 135 140

Ala Ala Ala Ala Ala Asn Gly Lys Lys Ile Asp Thr Lys His Leu Pro  
145 150 155 160

Ser Thr Cys Arg Asp Ala Ser Asp Ala Ser  
165 170

<210> 3

<211> 685

<212> PRT

<213> Neisseria meningitidis

<400> 3

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Ser Ile His Leu Gly His Met Val Glu His Ile Gln Thr Asp Val Trp  
20 25 30

Val Arg Phe Gln Lys Leu Arg Gly His Ala Cys His Tyr Cys Cys Ala  
35 40 45

Asp Asp Thr His Gly Thr Pro Val Met Leu Ala Ala Gln Lys Gln Gly  
50 55 60

Ile Ala Pro Glu Asp Met Ile Ala Lys Val Arg Glu Glu His Leu Ala  
65 70 75 80

Asp Phe Thr Gly Phe Phe Ile Gly Tyr Asp Asn Tyr Tyr Ser Thr His

85	90	95
Ser Pro Glu Asn Lys Gln Phe Ser Gln Asp Ile Tyr Arg Ala Leu Lys		
100	105	110
Ala Asn Gly Lys Ile Glu Ser Arg Val Ile Glu Gln Leu Phe Asp Pro		
115	120	125
Glu Lys Gln Met Phe Leu Pro Asp Arg Phe Val Lys Gly Glu Cys Pro		
130	135	140
Lys Cys His Ala Gln Asp Gln Tyr Gly Asp Asn Cys Glu Val Cys Gly		
145	150	155
Thr Thr Tyr Ser Pro Thr Glu Leu Ile Asn Pro Tyr Ser Ala Val Ser		
165	170	175
Gly Thr Lys Pro Glu Leu Arg Glu Ser Glu His Phe Phe Phe Lys Leu		
180	185	190
Gly Glu Cys Ala Asp Phe Leu Lys Ala Trp Thr Ser Gly Asn Asn Pro		
195	200	205
His Asp Gly Lys Pro His Leu Gln Ala Glu Ala Leu Asn Lys Met Lys		
210	215	220
Glu Trp Leu Gly Glu Gly Glu Glu Thr Thr Leu Ser Asp Trp Asp Ile		
225	230	235
Ser Arg Asp Ala Pro Tyr Phe Gly Phe Glu Ile Pro Asp Ala Pro Gly		
245	250	255
Lys Tyr Phe Tyr Val Trp Leu Asp Ala Pro Val Gly Tyr Met Ala Ser		
260	265	270
Phe Lys Asn Leu Cys Asp Arg Ile Gly Val Asp Phe Asp Glu Tyr Phe		
275	280	285
Lys Ala Asp Ser Gln Thr Glu Met Tyr His Phe Ile Gly Lys Asp Ile		
290	295	300
Leu Tyr Phe His Ala Leu Phe Trp Pro Ala Met Leu His Phe Ser Gly		
305	310	315
His Arg Ala Pro Thr Gly Val Tyr Ala His Gly Phe Leu Thr Val Asp		
325	330	335
Gly Gln Lys Met Ser Lys Ser Arg Gly Thr Phe Ile Thr Ala Lys Ser		
340	345	350
Tyr Leu Glu Gln Gly Leu Asn Pro Glu Trp Met Arg Tyr Tyr Ile Ala		
355	360	365
Ala Lys Leu Asn Ser Lys Ile Glu Asp Ile Asp Leu Asn Leu Gln Asp		
370	375	380
Phe Ile Ser Arg Val Asn Ser Asp Leu Val Gly Lys Tyr Val Asn Ile		

385		390		395		400
Ala Ala Arg Ala Ser Gly Phe Ile Ala Lys Arg Phe Glu Gly Arg Leu						
	405		410		415	
Lys Asp Val Ala Asp Ser Glu Leu Leu Ala Lys Leu Thr Ala Gln Ser						
	420		425		430	
Glu Ala Ile Ala Glu Cys Tyr Glu Ser Arg Glu Tyr Ala Lys Ala Leu						
	435		440		445	
Arg Asp Ile Met Ala Leu Ala Asp Ile Val Asn Glu Tyr Val Asp Ala						
	450		455		460	
Asn Lys Pro Trp Glu Leu Ala Lys Gln Glu Gly Gln Asp Glu Arg Leu						
	465		470		475	480
His Glu Val Cys Ser Glu Leu Ile Asn Ala Phe Thr Met Leu Thr Ala						
	485		490		495	
Tyr Leu Ala Pro Val Leu Pro Gln Thr Ala Ala Asn Ala Ala Lys Phe						
	500		505		510	
Leu Asn Leu Glu Ala Ile Thr Trp Ala Asn Thr Arg Asp Thr Leu Gly						
	515		520		525	
Lys His Ala Ile Asn Lys Tyr Glu His Leu Met Gln Arg Val Glu Gln						
	530		535		540	
Lys Gln Val Asp Asp Leu Ile Glu Ala Asn Lys Gln Ser Ile Ala Ala						
	545		550		555	560
Ala Ala Ala Pro Ala Ala Glu Glu Gly Lys Tyr Glu Lys Val Ala Glu						
	565		570		575	
Gln Ala Ser Phe Asp Asp Phe Met Lys Ile Asp Met Arg Val Ala Lys						
	580		585		590	
Val Leu Asn Cys Glu Ala Val Glu Gly Ser Thr Lys Leu Leu Lys Phe						
	595		600		605	
Asp Leu Asp Phe Gly Phe Glu Lys Arg Ile Ile Phe Ser Gly Ile Ala						
	610		615		620	
Ala Ser Tyr Pro Asn Pro Ala Glu Leu Asn Gly Arg Met Val Ile Ala						
	625		630		635	640
Val Ala Asn Phe Ala Pro Arg Lys Met Ala Lys Phe Gly Val Ser Glu						
	645		650		655	
Gly Met Ile Leu Ser Ala Ala Thr Ala Asp Gly Lys Leu Lys Leu Leu						
	660		665		670	
Asp Val Asp Thr Gly Ala Gln Pro Gly Asp Lys Val Gly						
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<211> 456
<212> PRT
<213> Neisseria meningitidis

<400> 4
Met Pro Gln Asn Thr Leu Asn Ile Val Ile Leu Ala Ala Gly Lys Gly
1 5 10 15

Thr Arg Met Tyr Ser Lys Met Pro Lys Val Leu His Arg Ile Gly Gly
20 25 30

Lys Pro Met Val Gly Arg Val Ile Asp Thr Ala Ala Ala Leu Asn Pro
35 40 45

Gln Asn Ile Cys Val Val Ile Gly His Gly Lys Glu Gln Val Leu Asp
50 55 60

Thr Val Lys Arg Asp Val Val Trp Val Glu Gln Thr Glu Gln Leu Gly
65 70 75 80

Thr Gly His Ala Val Lys Thr Ala Leu Pro His Leu Ser Ala Glu Gly
85 90 95

Arg Thr Leu Val Leu Tyr Gly Asp Val Pro Leu Ile Asp Val Glu Thr
100 105 110

Leu Glu Thr Leu Leu Glu Ala Ala Gly Asn Glu Val Gly Leu Leu Thr
115 120 125

Asp Val Pro Asn Asp Pro Thr Gly Leu Gly Arg Ile Ile Arg Asp Ser
130 135 140

Asn Gly Ser Val Thr Ala Ile Val Glu Glu Lys Asp Ala Asp Ala Val
145 150 155 160

Gln Lys Ala Val Lys Glu Ile Asn Thr Gly Ile Leu Val Leu Pro Asn
165 170 175

Ala Lys Leu Glu Asn Trp Leu Asn Ser Leu Ser Ser Asn Asn Ala Gln
180 185 190

Gly Glu Tyr Tyr Leu Thr Asp Leu Ile Ala Lys Ala Val Ala Asp Gly
195 200 205

Ile Lys Val His Pro Val Gln Val Arg Ala Ser His Leu Ala Ala Gly
210 215 220

Val Asn Asn Lys Leu Gln Leu Thr Glu Leu Glu Arg Ile Phe Gln Thr
225 230 235 240

Glu Gln Ala Gln Glu Leu Leu Lys Ala Gly Val Thr Leu Arg Asp Pro
245 250 255

Ala Arg Phe Asp Leu Arg Gly Arg Leu Lys His Gly Gln Asp Val Val
260 265 270

Ile Asp Val Asn Cys Ile Phe Glu Gly Asp Ile Glu Leu Gly Asp Asn

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275	280	285
Val Glu Ile Gly Ala Asn Cys	Val Ile Lys Asn Ala Lys	Ile Gly Ala
290	295	300
Asn Ser Lys Ile Ala Pro Phe	Ser His Leu Glu Ser Cys	Glu Val Gly
305	310	315 320
Glu Asn Asn Arg Ile Gly Pro	Tyr Ala Arg Leu Arg Pro	Gln Ala Arg
325	330	335
Leu Ala Asp Asp Val His Val	Gly Asn Phe Val Glu Ile	Lys Asn Ala
340	345	350
Ala Ile Gly Lys Gly Thr Lys	Ala Asn His Leu Thr Tyr	Ile Gly Asp
355	360	365
Ala Glu Val Gly Cys Lys Thr	Asn Phe Gly Ala Gly Thr	Ile Ile Ala
370	375	380
Asn Tyr Asp Gly Val His Lys	His Lys Thr Val Ile Gly	Asp Glu Val
385	390	395 400
Arg Ile Gly Ser Asn Cys Val	Leu Val Ala Pro Val Thr	Leu Gly Asn
405	410	415
Lys Val Thr Thr Gly Ala Gly	Ser Thr Ile Thr Arg Asn	Val Glu Asp
420	425	430
Asn Lys Leu Ala Leu Ala Arg	Ala Arg Gln Thr Val Ile	Glu Gly Trp
435	440	445
Val Arg Pro Glu Lys Asp Lys	Gln	
450	455	

<210> 5  
 <211> 421  
 <212> PRT  
 <213> Neisseria meningitidis

<400> 5

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Ala Gln Ile Val Glu Asn Ile	Lys Glu Asp Ala Glu Ser	Leu Ala Glu
35	40	45
Ser Val Lys Gly Gln Val Glu	Ser Ala Val Glu Thr Val	Ser Gly Ala
50	55	60
Val Glu Gln Val Lys Glu Thr	Val Ala Glu Met Leu Ser	Glu Ala Glu
65	70	75 80
Glu Ala Ala Glu Lys Ala Ala	Glu Gln Val Glu Ala Ala	Lys Glu Ala

				85				90				95			
Val	Ala	Glu	Thr	Val	Gly	Glu	Ala	Val	Gly	Gln	Val	Gln	Glu	Ala	Val
100				105				110							
Ala	Thr	Thr	Glu	Glu	His	Lys	Leu	Gly	Trp	Ala	Ala	Arg	Leu	Lys	Gln
115				120				125							
Gly	Leu	Thr	Lys	Ser	Arg	Asp	Lys	Met	Ala	Lys	Ser	Leu	Ala	Gly	Val
130				135				140							
Phe	Gly	Gly	Gly	Gln	Ile	Asp	Glu	Asp	Leu	Tyr	Glu	Glu	Leu	Glu	Thr
145				150				155				160			
Val	Leu	Ile	Thr	Ser	Asp	Met	Gly	Met	Glu	Ala	Thr	Glu	Tyr	Leu	Met
165				170				175							
Lys	Asp	Val	Arg	Asp	Arg	Val	Ser	Leu	Lys	Gly	Leu	Lys	Asp	Gly	Asn
180				185				190							
Glu	Leu	Arg	Gly	Ala	Leu	Lys	Glu	Ala	Leu	Tyr	Asp	Leu	Ile	Lys	Pro
195				200				205							
Leu	Glu	Lys	Pro	Leu	Val	Leu	Pro	Glu	Thr	Lys	Glu	Pro	Phe	Val	Ile
210				215				220							
Met	Leu	Ala	Gly	Ile	Asn	Gly	Ala	Gly	Lys	Thr	Thr	Ser	Ile	Gly	Lys
225				230				235				240			
Leu	Ala	Lys	Tyr	Phe	Gln	Ala	Gln	Gly	Lys	Ser	Val	Leu	Leu	Ala	Ala
245				250				255							
Gly	Asp	Thr	Phe	Arg	Ala	Ala	Ala	Arg	Glu	Gln	Leu	Gln	Ala	Trp	Gly
260				265				270							
Glu	Arg	Asn	Asn	Val	Thr	Val	Ile	Ser	Gln	Thr	Thr	Gly	Asp	Ser	Ala
275				280				285							
Ala	Val	Cys	Phe	Asp	Ala	Val	Gln	Ala	Ala	Lys	Ala	Arg	Gly	Ile	Asp
290				295				300							
Ile	Val	Leu	Ala	Asp	Thr	Ala	Gly	Arg	Leu	Pro	Thr	Gln	Leu	His	Leu
305															